

**From:** [Williams, Shawn](#)  
**To:** [Zaremba, Arthur H.](#)  
**Cc:** [Vaughan, Jordan L](#); [Stone, Zackary](#)  
**Subject:** Oconee Nuclear Station, Units 1, 2, and 3 - Request for Additional Information RE: Alternative Request (RA-20-0334) Regarding use of an Alternative to the ASME Code Case N-853 Acceptance Criteria (EPID L-2021-LLR-0032)  
**Date:** Thursday, August 05, 2021 1:22:57 PM  
**Attachments:** [RAIs for Oconee RR to adopt CC N-853 .docx](#)

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Dear Mr. Zaremba,

By letter dated May 4, 2021, Duke Energy Carolinas, LLC, submitted a relief request for Oconee Nuclear Station, Units 1, 2, and 3, requesting to use an alternative to certain provisions of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Case N-853, "PWR Class 1 Primary Piping Alloy 600 Full Penetration Branch Connection Weld Metal Buildup for Material Susceptible to Primary Water Stress Corrosion Cracking, Section XI, Division 1."

The U.S. Nuclear Regulatory Commission staff has determined that additional information is needed as provided in the attached. A clarification call to ensure mutual understanding was conducted on August 5, 2021.

Please respond within 30 days of the date of this e-mail.

If you have any questions, please contact me at 301-415-1009 or via e-mail at [Shawn.Williams@nrc.gov](mailto:Shawn.Williams@nrc.gov).

Sincerely,

Shawn Williams, Senior Project Manager  
Plant Licensing Branch, II-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos: 50-269, 50-270, and 50-287

cc w/encl: Listserv

REQUEST FOR ADDITIONAL INFORMATION  
PROPOSED ALTERNATIVE RA-20-0334 REGARDING USE OF ALTERNATIVE TO THE  
ASME CODE CASE N-853 ACCEPTANCE CRITERIA  
DUKE ENERGY CAROLINAS  
OCONEE NUCLEAR STATION, UNITS 1, 2, AND 3  
DOCKET NUMBERS 50-269, 50-270, AND 50-287  
EPID: L-2021-LLR-0032

By letter dated May 4, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession ML21124A170), Duke Energy Carolinas (the licensee) requested the use of an alternative to certain provisions of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Case N-853, "PWR Class 1 Primary Piping Alloy 600 Full Penetration Branch Connection Weld Metal Buildup for Material Susceptible to Primary Water Stress Corrosion Cracking, Section XI, Division 1." ASME Code Case N-853 has been incorporated by reference into Title 10 of the *Code of Federal Regulations* (10 CFR) 50.55a via inclusion in Regulatory Guide (RG) 1.147, Revision 19, "Inservice Inspection Code Case Acceptability, ASME Section XI, Division 1" (ADAMS Accession No. ML19128A244). The proposed alternative RA-20-0334 pertains to use of the acceptance criteria of ASME Code, Section XI, IWB-3514 in lieu of the Code Case N-853 required Section III, NB-5330, to disposition fabrication flaws detected during ultrasonic testing (UT) of the Alloy 52M weld-pad and heat-affected-zone (HAZ). RA-20-0334 is requested for remainder of the fifth 10-year inservice inspection (ISI) interval of the Oconee Nuclear Station (Oconee), Units 1, 2, and 3.

To complete its review, the NRC staff requests additional information (RAI).

RAI No. 1

The NRC staff notes that ASME Code Case N-853 requires that the UT utilized for the fabrication inspection of Alloy 52M weld-pad and HAZ be demonstrated in accordance with the ASME Code, Section V, and any detected flaws be dispositioned in accordance with acceptance criteria of Section III, NB-5330. The licensee requested to use acceptance criteria of ASME Code, Section XI, IWB-3514 in lieu of Section III, NB-5330, but did not provide a discussion on the UT performance demonstration and qualification. As a basis for RA-20-0334, the licensee discussed the NRC's previous safety evaluation dated August 6, 2007 (ADAMS Accession ML071280781), in which the NRC approved use of acceptance criteria of IWB-3514 in lieu of NB-5330 for UT of Alloy 690 full structural weld overlays (FSWO) at Oconee, Units 1, 2, and 3. The licensee stated that the technical basis used for the past approval is directly applicable for the current request.

Furthermore, the NRC staff notes that ASME Code, Section XI, Appendix VIII, Supplement 11, "Qualification Requirements for Full Structural Overlaid Wrought Austenitic Piping Welds," includes overlays in piping. The proposed weld-pad is similar to an overlay and is intended to provide a full structural primary pressure boundary.

Clarify whether the UT utilized for the fabrication inspection of Alloy 52M weld-pad and HAZ will be performance demonstrated and qualified in accordance with ASME Code, Section XI, Appendix VIII, Supplement 11. If the answer is no, provide justification and discuss the difference between RA-20-0334 and the NRC's previous safety evaluation dated August 6, 2007.

RAI No. 2

Section 5 of RA-20-0334 stated, in part,

“In using the rules in IWB-3514 for evaluation of flaws in the weld pad, the thickness of only the weld pad will be used.”

Clarify whether the examination volume specified in Figure 6, “Surface and Volumetric Acceptance Examination for BCWMB [Branch Connection Weld Metal Buildup] Prior to Nozzle Welding,” of ASME Code Case N-853 for Alloy 52M weld-pad and HAZ will be scanned by the UT during fabrication inspection. If the answer is no, provide justification.